

TRANSLATION OF AMENDMENT (August 11, 2005)

UNDER ARTICLE 34 OF PCT

-We amended claims 1 and 9, and
canceled claims 2 and 10.

-Amended pages 14-16 are attached.

-Amended parts of claims 1 and 9 are as follows.

" ... to be communicated with the first diffusion chamber;
a plurality of first support-gas jetting orifices formed in the
gas jetting surface to be communicated with the second diffusion
chamber; and
a plurality of second support-gas jetting orifices formed in the
gas jetting surface to be communicated with the second diffusion
chamber,
wherein each of the first support-gas jetting orifices is formed
into a ring shape that adjacently surrounds a corresponding one of
the source-gas jetting orifices, and
each of the second support-gas jetting orifices is arranged
between adjacent two of the source-gas jetting orifices."

CLAIMS

1. (amended) A showerhead that supplies a source gas and a supporting gas into a vacuum atmosphere in a processing vessel, so as to deposit a film on a surface of an object to be processed in the processing vessel, comprising:

a showerhead body provided with a gas jetting surface facing an inside of the processing vessel;

a first diffusion chamber formed in the showerhead body to receive the source gas and diffuse the same;

a second diffusion chamber formed in the showerhead body to receive the supporting gas and diffuse the same;

a plurality of source-gas jetting orifices formed in the gas jetting surface to be communicated with the first diffusion chamber;

a plurality of first supporting-gas jetting orifices formed in the gas jetting surface to be communicated with the second diffusion chamber; and

a plurality of second supporting-gas jetting orifices formed in the gas jetting surface to be communicated with the second diffusion chamber,

wherein each of the first supporting-gas jetting orifices is formed into a ring shape that adjacently surrounds a corresponding one of the source-gas jetting orifices, and

each of the second supporting-gas jetting orifices is arranged between adjacent two of the source-gas jetting orifices.

2. (cancelled)

3. The showerhead according to claim 1, wherein the source gas contains a high melting point metal.

4. The showerhead according to claim 3, wherein the source gas is an organic metal material gas.

5. A showerhead that supplies a source gas and a supporting gas into a vacuum atmosphere in a processing vessel, so as to deposit a film on a surface of an object to be processed in the processing vessel, comprising:

a showerhead body provided with a gas jetting surface facing an inside of the processing vessel;

a first diffusion chamber formed in the showerhead body to receive the source gas and diffuse the same;

a second diffusion chamber formed in the showerhead body to receive the supporting gas and diffuse the same;

a plurality of source-gas jetting orifices formed in the gas jetting surface to be communicated with the first diffusion chamber; and

a plurality of first supporting-gas jetting orifices formed in the gas jetting surface to be communicated with the second diffusion chamber;

wherein each of the source-gas jetting orifices is adjacently surrounded by at least two of the first supporting-gas jetting orifices.

6. The showerhead according to claim 5 further comprising a plurality of second supporting-gas jetting orifices formed in the gas jetting surface to be communicated with the second diffusion chamber, wherein

each of the second supporting-gas jetting orifices is arranged between adjacent two of the source-gas jetting orifices.

7. The showerhead according to claim 5, wherein the source gas contains a high melting point metal.

8. The showerhead according to claim 7, wherein the source gas is an organic metal material gas.

9. (amended) A film deposition apparatus that deposits a film on a surface of an object to be processed, by using a source gas and a

supporting gas, comprising:

a processing vessel;

an evacuation system that evacuates an inside of the processing vessel to form therein a vacuum;

a table provided in the processing vessel to dispose thereon the object;

a heater that heats the object disposed on the table; and

a showerhead provided on a top part of the processing vessel; the showerhead including:

a showerhead body provided with a gas jetting surface facing an inside of the processing vessel;

a first diffusion chamber formed in the showerhead body to receive the source gas and diffuse the same;

a second diffusion chamber formed in the showerhead body to receive the supporting gas and diffuse the same;

a plurality of source-gas jetting orifices formed in the gas jetting surface to be communicated with the first diffusion chamber;

a plurality of first supporting-gas jetting orifices formed in the gas jetting surface to be communicated with the second diffusion chamber; and

a plurality of second supporting-gas jetting orifices formed in the gas jetting surface to be communicated with the second diffusion chamber,

wherein each of the first supporting-gas jetting orifices is formed into a ring shape that adjacently surrounds a corresponding one of the source-gas jetting orifices, and

each of the second supporting-gas jetting orifices is arranged between adjacent two of the source-gas jetting orifices.

10. (cancelled)

11. A film deposition apparatus that deposits a film on a surface of an object to be processed, by using a source gas and